



Department of Transportation
Room Plaza 401
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NLX has reviewed the FAR Part 60 NPRM and submits the comments that follow. In general we regard this as a significant step forward in the qualification and use of advanced flight simulators in commercial aviation. It seems that clarification is needed in areas but in general the intent, once understood, represents many present day practices and/or improvements that most agree are a step forward in the overall process of FSD and FTD qualification.

We are also familiar with the work the ATA has done on this topic and find this quite extensive and a thorough examination of all aspects of the proposed Part 60 and related material. Since NLX is a simulator manufacturer and not presently a simulator operator we have limited our comments to those that are most pertinent to the production of flight FSDs and FTDs as opposed to the operation of them. In addition, the ATA work provides more than adequate comments and recommendations from both the operators and manufacturers perspective. We have chosen not to duplicate what others more affected by the operational impacts have so thoroughly covered.

The only operational area that NLX would comment on is the Quality Assurance program. Although we understand the perceived need and reasons why such a program is part of this new rule, we must question if there is an associated cost benefit to offset the cost impact to implementing and maintaining such a program. This is of particular importance with the present state of the airline industry.

NLX believes it essential that the new Part 60 and related QPS documents be compatible with, if not identical to what is regarded as the international standards (most recent ICAO and JAR STD). It probably doesn't need reiteration, but the differences between the FAA qualification requirements and the international requirements adds costs and often results in confusion to the process of getting a FSD or FTD into approved training service for operators that desire another regulatory authority's approval. We understand the FAA plan is to update the QPS after the Part 60 rules is approved to prevent further delay in getting Part 60 approved and in place. We understand that updating the QPS *should not* require the lengthy time frames experienced with changes like AC120-40C, but given this NPRM, however, the industry has no assurance this will occur. Our concern is that updating the QPS after the rule is in place will result in an extended time frame of possibly several years that the obsolete requirements will be a rule that the industry must comply with. Without some guarantee that this will not be the case, we must recommend that the QPS be updated to reflect the latest JAR/ICAO material before the rule is put into effect.

The motion system requirements in Appendix A – Attachment 2 Table 3 appear to be similar to those distributed in a late release of Draft AC120-40C. Many in the simulator industry at the time responded that these were impossible to meet with existing motion systems and would result in significant additional cost to a FSD. If released in this form, this requirement could make Level D simulator qualifications difficult or impossible until the requirements are changed. These requirements should be brought in line with the latest international standard (ICAO) prior to Part 60 becoming effective.

In 60.13(a) it states, “the sponsor must submit the airplane manufacturer’s flight test data to the NSPM.” It is obvious that the entire flight test data package could not practically be submitted nor would it be of any use to the FAA for the most part. Presently, only the flight test or other data required to substantiate the tests presented in the QTG is required to be submitted. This is acceptable now and it does not appear that the FAA intends to change that policy. This requirement should be clarified as to the scope of the flight test data required to be submitted to the NSPM.

Part 60.15 (b) does not appear to allow for a sponsor to request an initial evaluation until the FSD or FTD is completely tested, all items functional and all tests passing. It could be read as requiring the device to be ready to enter training service. With the need to get a high cost training device into training service and the lengthy time required to get an initial evaluation scheduled, it is not practical to get an FSD or FTD completely finished and then wait for the evaluation. Within reason, the FAA must allow for some items to not be completed when the request for an initial evaluation is submitted with the understanding that they will be before the evaluation starts.

Appendix A requires that all MQTGs be converted to electronic form within six years of the effective date of the rule. Even if this is just a requirement to scan the paper copy of the MQTG into a computer form, it is still an expensive process. If this requirement is for a more extensive conversion (editable text, searchable text etc), then this is probably not financially justifiable for most operators. In many cases, it could fall on the simulator manufacturer to do the conversion if the operator did not acquire the source data used to construct the original QTG. This requirement should be clarified as to the form and functional capability the FAA desires and the reason for this requirement. Once this is understood possibly the FAA requirement can be satisfied with a more feasible and cost effective approach. Otherwise, it does not appear this requirement can be justified from a cost benefit perspective.

NLX appreciates the opportunity the NPRM process permits us to provide our comments and recommendations. NLX is confident that the FAA will be judicious in its application of Part 60 and looks forward to working with the FAA and industry in this significant step forward in the qualification and use of advanced flight simulators in commercial aviation.

Thank you,

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